REMARKS

This Application has been carefully reviewed in light of the Office Action mailed November 29, 2006 ("*Office Action*"). At the time of the *Office Action*, Claims 1-28 were pending in the Application. In the *Office Action*, the Examiner rejects Claims 1-28. Applicant amends Claims 1 and 25. As described below, Applicant believes all claims to be allowable over the cited references. Therefore, Applicant respectfully requests reconsideration and full allowance of all pending claims.

Claim Objections

The Examiner objects to: (1) Claim 1 because of the use of the term "adapted" and (2) Claim 25 because of the use of "and/or." *Office Action*, p. 2. While Applicant may not agree with these objections, Applicant has amended Claims 1 and 25 in accordance with the Examiner's suggestions in order to hasten issuance of the Application. Accordingly, Applicant respectfully requests that the objections to Claims 1 and 25 be withdrawn.

Section 103 Rejections

The Examiner rejects Claims 1-12, 14-17, and 22-28 under 35 U.S.C. § 103(a) as being unpatentable over C.M.R. Leung "An object-oriented approach to directory systems," - 1990 ("*Leung*") in view of Ordille et al., "Nomenclator Descriptive Query Optimization for Large X.500 Environments," 1999, pages 185-196 ("*Ordille*"). The Examiner rejects Claims 13 and 18-21 under 35 U.S.C. § 103(a) as being unpatentable over *Leung* in view of *Ordille* as applied to Claims 1-12, 14-17, and 22-28 above, and further in view of M.A. Bauer et al. "A simulation Model of X.500 Directories Initial Experiences" - 1991 ("*Bauer*"). Applicant respectfully traverses these rejections for the reasons stated below.

A. The Claims are Allowable.

1. Claims 1-7, 14-17, and 22-28 are allowable over the proposed *Leung-Ordille* combination.

Independent Claim 1 of the present application, as amended, recites:

> A method of arranging data in a database comprising:
>
> creating a first table storing data comprising at least one data entry, the data entry comprising a plurality of data components, the first table comprising one row for each data entry; and
>
> creating a second table storing the plurality of data components of the data entry of the first table, the second table comprising one row for each of the plurality of data components of the data entry of the first table.

Applicant respectfully submits that the proposed *Leung-Ordille* combination does not disclose, teach, or suggest each and every element of Applicant's Claim 1.

Among other aspects, the proposed *Leung-Ordille* combination does not disclose, teach, or suggest "creating a second table storing the plurality of data components of the data entry of the first table, the second table comprising one row for each of the plurality of data components of the data entry of the first table," as recited in Applicant's Claim 1.

As teaching these claimed aspects, the *Office Action* appears to point to *Leung*, Figure 6 ("ENTRY") and page 737, column 1, second paragraph and *Ordille*, page 193, column 1, last paragraph through page 194, column 2, first paragraph. (*Office Action*, page 4). Applicant respectfully submits that *Leung* and *Ordille*, whether taken alone or in combination, fail to teach or suggest both "a first table storing . . . at least one data entry . . . comprising a plurality of data components" and "a second table storing the plurality of data components of the first data entry of the first table," as required by Claim 1. Moreover, the proposed combination fails to teach or suggest "the second table comprising one row for each of the plurality of data components of the data entry of the first table," as is also required.

Leung discloses an object-oriented database consisting of two objects "the DIT and ENTRY, stored as two relational tables," which are illustrated in Figure 6. (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). *Leung*'s DIT table "holds the information of

the structure of the DIT." (*Id*). In the DIT table, each entry occupies one row and contains "the system identifier of an object, that of its parent, and its RDN." (*Id*). The ENTRY table, on the other hand, includes detailed information about each directory object. (*Id*). In the ENTRY table, each row contains "the system identifier of [a directory] object, and an attribute value of an attribute type of the object in both normalized and raw forms." (*Id*).

The *Office Action* appears to point to the DIT as teaching the claimed "first table" and the ENTRY as teaching the claimed "second table." (*Office Action*, page 3-4). Accordingly, Applicant assumes that the *Office Action* points to: (1) a row of the DIT as teaching the claimed "at least one data entry" and (2) two or more of *Leung*'s "system identifier of an object, that of its parent, and its RDN" as teaching the claimed "a plurality of data components." (*See Office Action*, page 3). However, even if one assumes these assertions to be correct, *Leung* still fails to disclose, teach, or suggest an ENTRY table storing the plurality of data components of the first data entry of the DIT table, as would be required by Applicant's claim. Instead, *Leung*'s ENTRY table contains "the system identifier of an object, and an attribute value of an attribute type of the object in both normalized and raw forms." (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). Second, *Leung* fails to disclose, teach, or suggest that "the second table compris[es] one row for each of the plurality of data components," as is also required by the claim.

Accordingly, *Leung* fails to teach or suggest "creating a second table storing the plurality of data components of the data entry of the first table, the second table comprising one row for each of the plurality of data components of the data entry of the first table," as recited in Applicant's Claim 1.

Ordille fails to remedy the deficiencies of *Leung*. The *Office Action* cites to *Ordille*, stating:

> Ordille discloses creating a second table storing data components and having one row for each component of the data (see Ordille pages 193, col. 1, last paragraph to page 194, col. 2, first paragraph).

(*Office Action*, p. 4). The cited portion of *Ordille* describes Table 2 which "gives the results of [the authors'] experiments." (*Ordille*, page 193, column 1, last paragraph.) Accordingly, Applicant assumes that the *Office Action* points to *Ordille*'s Table 2 as teaching the claimed "a second table." (*See Office Action*, p. 4). However, Applicant respectfully submits that, while *Ordille*'s Table 2 may store some data, *Ordille*'s table fails to disclose, teach, or suggest Applicant's claimed "second table."

First, the cited portion of *Ordille* fails to disclose, teach or suggest, "a second table storing the plurality of data components of the first data entry of the first table," as required by Claim 1. *Ordille*'s Table 2 shows the "performance of X.500 (cold cache), and Nomenclator [cold cache and warm cache] for the test queries." (*Ordille*, page 194, Table 2). Each row in Table 2 specifies a test query number, a number of items, and the performance results from X.500, Nomenclator (cold cache), and Nomenclator (warm cache). (*Id*). As Claim 1 requires "the second table comprising one row for each of the plurality of data components," Applicant assumes that the Examiner points to a query and/or its corresponding data as teaching the claimed "data component." Even assuming, for the sake of argument, that this assertion is correct, *Ordille* fails to disclose, teach or suggest "a second table storing the plurality of data components of the first data entry of the first table," as is required by Applicant's claim.

Second, the cited portion of *Ordille* fails to disclose, teach or suggest, "the second table comprising one row for each of the plurality of data components of the data entry of the first table," as is required by Applicant's claim. As providing a suggestion to combine the references, the *Office Action* refers to *Ordille*'s Table 1 and Table 2. (*Office Action*, page 4). Table 1 shows test queries and their identifying numbers. (*Ordille*, page 193, Table 1). For example, one portion of Table 1 reads:

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1       retrieve (people.all)
          where people.c = "US" and
            people.name = "Ordille"
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(*Id*). A corresponding row in Table 2 lists the following information:

1	1	221.4	34	13.5	1	16.4	.004	55,350

(*Id.*, at page 194, Table 2). Claim 1 requires "a first table storing . . . at least one data entry . . . comprising a plurality of data components" and "the second table comprising one row for each of the plurality of data components of the data entry of the first table," as is also required. While *Ordille* may show two tables containing related data, *Ordille* fails to disclose, teach, or suggest the aspects specifically required by Applicant's claim.

Accordingly, the proposed *Leung-Ordille* combination fails to disclose, teach, or suggest, "creating a second table storing the plurality of data components of the data entry of the first table, the second table comprising one row for each of the plurality of data components of the data entry of the first table," as recited in Applicant's Claim 1. Likewise, independent Claims 8, 14, and 22 include limitations that, for substantially similar reasons, are not taught or suggested by the references. Because *Leung* and *Ordille*, whether taken alone or in combination, fail to teach or suggest every element of independent Claims 1, 8, 14, and 22, Applicants respectfully request reconsideration and allowance of Claims 1, 8, 14, and 22, and their respective dependent claims.

2. Claims 13 and 18-21 are allowable over the proposed *Leung-Ordille-Bauer* combination.

Independent Claim 13 of the present application recites:

> A database having a data storage arrangement comprising:
> a first table directed to a hierarchy which defines a relationship between a plurality of objects and configured to have one row per object;
> a second table directed to the plurality of objects of the first table, the second table defining one or more values within each of the plurality of objects of the first table and configured to have one row per value; and
> a third table directed to one or more selected components of the one or more values of the second table and configured to have one row for each component of each of the one or more values of the second table.

Applicant respectfully submits that the *Leung-Ordille-Bauer* combination does not disclose, teach, or suggest each and every element of Applicant's Claim 13.

For example, Applicant respectfully submits that the *Leung-Ordille-Bauer* combination does not disclose, teach, or suggest "a second table directed to the plurality of objects of the first table, the second table defining one or more values within each of the plurality of objects of the first table and configured to have one row per value," as recited in Applicant's Claim 13. Certain of the features in the recited claim language is analogous to features discussed above with regard to Claim 1. Accordingly, for reasons similar to those discussed above with regard to Claim 1, Applicant respectfully submits that the proposed *Leung-Ordille-Bauer* combination does not disclose, teach, or suggest "a second table directed to the plurality of objects of the first table, the second table defining one or more values within each of the plurality of objects of the first table and configured to have one row per value," as recited in Applicant's Claim 13.

Additionally, Applicant respectfully submits that the *Leung-Ordille-Bauer* combination does not disclose, teach, or suggest "a third table directed to one or more selected components of the one or more values of the second table and configured to have one row for each component of each of the one or more values of the second table," as recited in Applicant's Claim 13. In the *Office Action*, the Examiner acknowledges that *Leung* fails to explicitly disclose a third table. (*Office Action*, page 8). Instead, the Examiner relies on *Bauer* for disclosure of the above-recited features. However, *Bauer* merely relates, however, to a "testbed to be used in investigating the behavior of X.500 directories in large distributed environments." (*Bauer*, Abstract). More specifically, *Bauer* "reports on initial results of a simulation of an X.500 distributed environment, as well as on the methodology and on experiences with the tools and techniques used." (Page 256, Section 1, paragraph 2). In all, "18 experiments were run, each for a simulated time period of 4 hours." (Page 265, Section 4, paragraph 1). *Bauer* summarizes the results of the 18 experiments in Tables 3 to 8 on pages 265-271. Information in the tables includes the average number of requests processed by the DSAs, the standard deviation of

the number of requests, the average size of the request queue, the standard deviation of the request queue, the maximum size of the request queue, and the minimum size of the request queue. (Page 265, Section 4). None of the illustrated tables, however, relate to "a third table directed to one or more selected components of the one or more values of the second table and configured to have one row for each component of each of the one or more values of the second table," as recited in Applicant's Claim 13.

For at least these reasons, Applicant respectfully requests reconsideration and allowance of Claim 13.

Independent Claim 18 recites certain limitations that are similar to the features discussed above with regard to Claim 13. As an example, Claim 18 recites "a second table directed to the plurality of objects of the first table, the second table defining one or more values within each of the plurality of objects of the first table and configured to have one row per value." As another example, Claim 18 recites "a third table directed to one or more selected components of the one or more values of the second table and configured to have one row for each component of each of the one or more values of the second table." Thus, for reasons similar to those discussed above with regard to Claim 13, Applicant respectfully submits that Claim 18 is allowable over the proposed *Leung-Ordille-Bauer* combination.

For at least these reasons, Applicant respectfully requests reconsideration and allowance of Claim 18, together with Claims 19-21 which depend from Claim 18.

B. <u>The Proposed Combinations are Improper.</u>

The M.P.E.P. sets forth the strict legal standard for establishing a *prima facie* case of obviousness based on modification or combination of prior art references. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references where combined) must teach or suggest all the claim limitations." M.P.E.P. § 2142, 2143. The teaching, suggestion or motivation for the modification or combination and the reasonable expectation of success must both be found in the prior art and cannot be based on an Applicant's disclosure. *See id.* (citations omitted). "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art" at the time of the invention. M.P.E.P. § 2143.01. Even the fact that references *can* be modified or combined does not render the resultant modification or combination obvious unless the prior art teaches or suggests the desirability of the modification or combination. *See id.* (citations omitted).

The governing Federal Circuit case law makes this strict legal standard even more clear.[1] According to the Federal Circuit, "a showing of a suggestion, teaching, or motivation to combine or modify prior art references is an essential component of an obviousness holding." *In re Sang-Su Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 2002) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000)). "Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved." *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). However, the "range of sources available . . . does not diminish the requirement for actual evidence." *Id.* Even a determination that it would have been obvious to one of ordinary skill in the art at the time of the invention to try the proposed

[1] Note M.P.E.P. 2145 X.C. ("The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references.").

modification or combination is not sufficient to establish a *prima facie* case of obviousness. *See In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988).

In addition, the M.P.E.P. and the Federal Circuit repeatedly warn against using an applicant's disclosure as a blueprint to reconstruct the claimed invention. For example, the M.P.E.P. states, "The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." M.P.E.P. § 2142. The governing Federal Circuit cases are equally clear. "A critical step in analyzing the patentability of claims pursuant to [35 U.S.C. § 103] is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. . . . Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher.'" *In re Kotzab,* 217 F.3d 1365, 1369, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000) (citations omitted). In *In re Kotzab*, the Federal Circuit noted that to prevent the use of hindsight based on the invention to defeat patentability of the invention, the court requires the Examiner to show a motivation to combine the references that create the case of obviousness. *See id. See also, e.g., Grain Processing Corp. v. American Maize-Products,* 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988). Similarly, in *In re Dembiczak*, the Federal Circuit reversed a finding of obviousness by the Board, explaining that the required evidence of such a teaching, suggestion, or motivation is essential to avoid impermissible hindsight reconstruction of an applicant's invention:

> Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.* Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the

> inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.

175 F.3d at 999, 50 U.S.P.Q.2d at 1617 (emphasis added) (citations omitted).

In the *Office Action*, the Examiner acknowledges, with regard to Claim 1, that *Leung* does not disclose creating a second table. (*Office Action*, page 4). In maintaining the rejection, the Examiner speculates:

> It would have been obvious to one [of] ordinary skill in the art at the time the invention was made to modify the method of Leung by creating a second table storing data components and having one row for each component of the data as disclosed by Ordille (see Ordille Tables 1 and 2) . . . to provide efficient descriptive naming for widely distributed data in an X.500 environment (see Ordille page 195, col. 1, paragraph (6), section summary), therefore, improving the performance of the directory searching methods and system.

(*Id*). With respect to Claims 13 and 18, the Examiner also speculates:

> It would have been obvious to one [of] ordinary skill in the art at the time the invention was made to modify the method of Leung by a third table directed to one or more selected components of the one or more values of the second table . . . to provide directory services in a distributed system environment and to evaluate changes to the standard.

(*Id.*, page 8 (emphasis removed), citing *Bauer*, page 265, col. 2, paragraph 4).

Again, it appears that the Examiner has merely proposed alleged advantages of combining *Leung* with *Ordille* and *Bauer* (advantages which Applicant does not admit could even be achieved by combining these references in the manner the Examiner proposes). While the Examiner has cited portions of *Ordille* and *Bauer* that tout advantages of their respective techniques, the Examiner has not pointed to any portions of the cited references that would teach, suggest, or motivate one of ordinary skill in the art at the time of invention to incorporate the features of the respective *Ordille* and *Bauer* techniques into the object-oriented database disclosed in *Leung*. In other words, the alleged advantage of the system disclosed in *Ordille* does not provide an explanation as to: (1) why it would have been obvious to one of ordinary skill in the art at the time of

Applicant's invention (***without using Applicant's claims as a guide***) to modify the particular techniques disclosed in *Leung* with the cited disclosures of *Ordille* and *Bauer*; (2) how one of ordinary skill in the art at the time of Applicant's invention would have actually done so; and (3) how doing so would purportedly meet the limitations of Applicant's claims.

Indeed, if it were sufficient for Examiners to merely point to a purported advantage of one reference and conclude that it would have been obvious to combine of modify that reference with other references simply based on that advantage (which, as should be evident from the case law discussed above, it certainly is not), then virtually any two or more references would be combinable just based on the fact the one reference states an advantage of its system. Of course, as the Federal Circuit has made clear and as discussed above, that is not the law. Accordingly, Applicant respectfully submits that the Examiner's conclusions set forth in the Office Action do not meet the requirements set forth in the M.P.E.P. and the governing Federal Circuit case law for demonstrating a *prima facie* case of obviousness.

Furthermore, it is improper for an Examiner to use hindsight having read the Applicant's disclosure to arrive at an obviousness rejection. *In re* Fine, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). It is improper to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re* Fritch, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). It is clear based at least on the many distinctions discussed above that the proposed combinations do not, taken as a whole, suggest the claimed invention, taken as a whole. Rather, Appellants respectfully submit that the Examiner has merely pieced together disjointed portions of references, with the benefit of hindsight using Appellants' claims as a blueprint, in an attempt to reconstruct Appellants' claims.

For at least these reasons, Applicant submits that the rejection of Claims 1-28 is improper. Applicant respectfully requests reconsideration and allowance of Claims 1-28.

CONCLUSION

Applicant has made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicant respectfully requests full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Jenni R. Moen, Attorney for Applicant, at the Examiner's convenience at (214) 953-6809.

Applicant believes that no fees are due. However, the Commissioner is hereby authorized to charge any fees or credit any overpayment to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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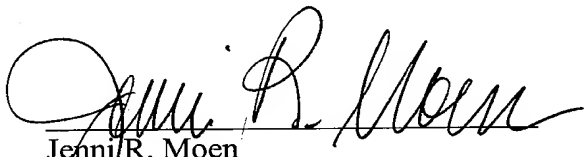
Attorneys for Applicant



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